

IN THE CLAIMS:

- 1 1. (Cancelled)

- 1 2. (Previously Presented) The conformable fuel cell as defined in claim 6 wherein
2 said current collectors at each of said anode aspect and said cathode aspect apply
3 adequate compression effectively over the active area of the membrane electrolyte.

- 1 3. (Original) The conformable fuel cell as defined in claim 2 wherein said
2 compression applied to said active area is equal to or greater than about 100 psi.

- 1 4. (Previously Presented) The conformable fuel cell as defined in claim 6 further
2 comprising management of water from cathode to anode such that water management is
3 achieved within the fuel cell.

- 1 5. (Previously Presented) The conformable fuel cell as defined in claim 6 wherein
2 said fuel is substantially comprised of at least one of the following: a vapor fuel, a gel
3 fuel, a liquid fuel and combinations thereof.

- 1 6. (Previously Presented) A conformable fuel cell, comprising:
2 (A) a membrane electrolyte intimately interfacing with a catalyst layer
3 along each of the membrane's major surfaces being a catalyzed membrane
4 electrolyte, having an anode aspect and a cathode aspect, and which catalyzed
5 membrane electrolyte is conformable to a plurality of desired shapes;
6 (B) diffusion layers sandwiching said catalyzed membrane electrolyte,
7 said diffusion layers being comprised of materials that are conformable;

8 (C) flexible current collectors coupled with each of said anode aspect
9 and said cathode aspect of said membrane electrolyte;

10 (D) a fuel delivery means coupled with said anode aspect of said
11 membrane electrolyte that delivers fuel substantially uniformly to said anode
12 aspect while said fuel cell maintains a desired shape;

13 (E) a conformable fuel cell housing formed from a molded plastic
14 frame that has been formed according to said desired shape, said conformable fuel
15 cell housing maintaining high compression along the active surfaces of the fuel
16 cell;

17 (F) electrical coupling disposed across said anode aspect and said cathode
18 aspect and having means for connection to an application device being powered by said
19 fuel cell; and

20 (G) a dedicated layer of material that substantially expands upon hydration,
21 thus imparting compression.

1 7-11 (Cancelled)

1 12. (Previously Presented) The conformable fuel cell as defined in claim 6 wherein
2 said conformable fuel cell is shaped to conform to one of the following:

3 (A) a body segment; and

4 (B) a contoured wall of an application device; and

5 (C) an exterior housing or an interior volume of an application device.

1 13. (Previously Presented) The conformable fuel cell as defined in claim 6 wherein
2 said conformable fuel cell is configured to attach to an article of clothing mechanically.

1 14. (Previously Presented) The conformable fuel cell as defined in claim 6 wherein
2 fuel delivery is accomplished from a detachable conduit that connects to said anode
3 aspect of the fuel cell.

1 15-25 (Cancelled)

2 26. (Previously Presented) A conformable fuel cell, comprising:

3 (A) a membrane electrolyte intimately interfacing with a catalyst layer
4 along each of the membrane's major surfaces being a catalyzed membrane
5 electrolyte, having an anode aspect and a cathode aspect, and which catalyzed
6 membrane electrolyte is conformable to a plurality of desired shapes;

7 (B) diffusion layers sandwiching said catalyzed membrane electrolyte,
8 said diffusion layers being comprised of materials that are conformable;

9 (C) flexible current collectors coupled with each of said anode aspect
10 and said cathode aspect of said membrane electrolyte;

11 (D) a fuel delivery means coupled with said anode aspect of said
12 membrane electrolyte that delivers fuel substantially uniformly to said anode
13 aspect while said fuel cell maintains a desired shape;

14 (E) a conformable fuel cell housing formed from a molded plastic
15 frame that has been formed according to said desired shape, said conformable fuel
16 cell housing maintaining high compression along the active surfaces of the fuel
17 cell;

18 (F) electrical coupling disposed across said anode aspect and said cathode
19 aspect and having means for connection to an application device being powered by said
20 fuel cell; and

21 (G) a dedicated layer of material that substantially expands upon exposure to
22 fuel, thus imparting compression.

1 27. (Cancelled)

1 28. (Previously Presented) The conformable fuel cell of claim 6, wherein the
2 conformable fuel delivery means comprises a layer of gelled fuel.

1 29. (Previously Presented) The conformable fuel cell of claim 6, wherein the
2 conformable fuel delivery means is affixed to the anode aspect of the fuel cell.

1 30. (Cancelled)